Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letters to the Editor

Effect of COVID 19 Second Wave on Children with type 1 Diabetes Mellitus in India

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COVID 19
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Outcome

COVID 19 second wave in India has emerged as a major health crisis. In the last year it was observed that more complications tend to develop in ageing population and patients with underlying comorbidities [1]. This has raised alarms among physicians regarding children suffering from chronic conditions like Type 1 Diabetes Mellitus (T1DM) [2,3].

First wave in India was not that widespread, community spread was limited and because of lesser number of patients, severity of disease in T1DM patients could not be commented. Contrary to the first wave in which most of the children were asymptomatic, more children are getting affected in the current scenario and are also showing severe symptoms and whole families are getting infected, it has now become the need of hour to find relation of COVID19 severity and T1DM in the present situation.

A telephonic survey was conducted in fifty-four T1DM patients enrolled in pediatric endocrinology clinic in a tertiary care centre during second wave of COVID19. In the last 2 months (15 March – May 14, 2021), 18 (33.3%) experienced symptoms suggestive of COVID, 30 (55.5%) had a family member COVID positive/having symptoms suggestive of COVID 19 and in 3 (5.5%) there was a mortality in family. Among 34 children who were tested, 8 patients were found positive for COVID19 in this second wave and 1 out of them was asymptomatic. Among positive patients, predominant symptoms were fever, cough and diarrhea, none of them require oxygenation, recovered in average 4.2 ± 1.8 days and there was no mortality due to COVID 19. Only 2 patients required hospitalization during the period, one because of gastroenteritis and other due to hypoglycemic episodes leading to seizures. None of them have experienced any unavailability of insulin or glucostrips during this period.

In the first wave, increased severity of COVID19 is well proven in T2DM but there is limited literature regarding consequences and correlation between Covid-19 and T1DM in our country [3]. However, COVID19 had indirectly affected T1DM patients in many aspects like interrupted supply of drugs and hindrance in obtaining medical services especially during lockdown resulting in poor glycemic control and subsequently, more complications [4]. There was poor glycemic control in last year but this time there is good glycemic control due to uninterrupted supply of insulin in the state and parents being more aware as a result of more telephonic consultations after first wave.

A systematic review done in both adult and pediatric patients concluded the prevalence of T1DM in COVID-19 patients ranged from 0.15% to 28.98%, while the rate of COVID-19 in patients with T1DM ranged from 0% to 16.67%. The most common reported presentations were dry cough, nausea, vomiting, fever, and elevated blood glucose levels [5]. However no strong evidence was there to suggest higher mortality rates in T1DM children in comparison with their healthy peers but poor outcomes and more deaths were recorded in diabetic adults after COVID-19 infection [3]. Results of our study were also concordant with these previous studies.

We conclude that there is not much increase in severity of COVID 19 in children with T1DM in the second wave of COVID 19 despite families of many of them got affected. In future, more studies of larger sample sizes are required to reach a definitive conclusion.

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Compliance with ethical standards

yes.

Authors contribution

AV: implemented the study, collected data and wrote manuscript; SV: data compilation, analysis and provided inputs in manuscript; KD: implemented the study and data collection; NDV: supervised data collection and provided inputs to manuscript.

Declaration of competing interest

none.

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